APPENDIX A

Septic Systems in Kentucky

In areas of Kentucky lacking community-wide sewage collection and treatment systems, the most popular alternative method of wastewater treatment is the individual on-site **septic system**, which treats wastewater without discharging effluent to a water body by percolating the wastewater through the soil of a drainfield. As the water slowly moves down through the soil, microorganisms consume the remaining organic waste, and potentially harmful bacteria are destroyed. A properly sited, installed, and maintained septic system may last 20 to 25 years, or longer if multiple drainfields are alternated. However, they cannot guarantee service indefinitely, and eventually a more permanent wastewater treatment method must be provided. Currently more than half a million septic systems are scattered across the Commonwealth.[1]

Because septic systems do not discharge from a discrete pipe into a water body, they are not categorized as point sources of pollution. Therefore they are not regulated in the DOW's permit system. Instead, this authority is transferred by KRS 224.10-194 from the Natural Resources and Environmental Protection Cabinet to the Cabinet for Human Resources (CHR). The regulatory authority for CHR to implement this responsibility is subsequently derived from KRS 211.350 and set forth in 902 KAR 10:081 through 10:085.

Inspections are conducted by staff of Kentucky's local boards of health, but only on those systems installed after July 15, 1986 unless a complaint is filed, as spelled out in KRS 211.355. Installers of on-site wastewater systems must be certified by CHR, in accordance with KRS 211.357.

A properly installed, used, and maintained septic system can provide several decades of effective and economical on-site treatment for an individual residence. However, several topographic and geologic characteristics severely limit the effectiveness of septic systems in Kentucky. Much of the land in the Commonwealth is distinguished by moderate to steep slopes, on which drainage fields cannot function well. Many other areas are prone to flooding, which washes untreated sewage to the surface and contaminates neighboring streams and wetlands. Furthermore, according to the U.S. Soil Conservation Service (SCS), most of the soils across Kentucky--even in slightly rolling and flat areas--contain a high percentage of clayey, tight soils that hamper the percolation of wastewater. Shallow soils, such as those thinly covering the limestone bedrock (karst terrain) underlying much of Kentucky, cannot sufficiently treat wastewater before it reaches the porous limestone and enters the groundwater. Once the insufficiently treated wastewater enters the groundwater network, it can contaminate drinking water supplies with a variety of diseases and can damage fragile cave ecosystems. The American Cave Conservation Association estimates that as much as 60 percent of the Commonwealth's rural karst groundwater drinking water supplies may be contaminated by sewage.[2]

Improper septic tank design and operation have further eroded the performance record of septic systems in Kentucky. Many of the septic systems now in existence in Kentucky were installed before 1985 (when state regulations requiring proper installation and operation practices were adopted), without concern for groundwater protection and under conditions that are now prohibited.[3] Problems included poor site selection, inappropriate or underdesigned systems, negligent installation practices, and poor operation and maintenance practices. Unfortunately, the consequences of these problems still plague Kentucky's environment as many of these older systems are still in use.

The CHR is promoting the use of ***constructed wetlands*** on an experimental basis as an alternative to failing septic systems. Constructed wetlands are human-engineered wetlands created to harness the

natural ability of these ecosystems to break down the pollutants found in domestic sewage. As wastewater moves slowly through the wetland, many solids settle to the bottom and add nutrients to the sediment. Marsh plants established in the wetlands (e.g., cattails, bulrushes, iris, and arrowhead) participate in the treatment process by absorbing excess nutrients and transferring oxygen to their roots and providing a growth medium for the bacteria that help break down other organic wastes.[4] After passing through two or more cells of the wetland, the effluent either seeps into the soil below or is released into a drainfield similar to those used with conventional septic tanks.[5] More than 120 of these systems have been constructed already, most for individual residences.

These systems may prove a viable wastewater treatment alternative where soils are rocky and the water table is shallow, or where space for an on-site system is limited. However, preliminary monitoring of the experimental wetland systems has revealed some problems with fecal coliform levels.[6] The CHR expects to achieve better results through technical improvements. However, until that time, constructed wetlands should not be considered a panacea for all on-site wastewater problems, but a possible alternative for some.

For all of the above reasons, many clusters of septic tanks in suburban and other developed areas throughout the Commonwealth are viable candidates for connection to a municipal wastewater facility or other alternative treatment system. Accordingly, this report has incorporated into its summary of recommendations some that address on-site systems, namely an endorsement of constructed wetlands where they prove feasible, and requirements to assure that new construction and existing homes and facilities are or will be served by a reliable on-site sewage system if they are not connected to a sewer system. These recommendations are discussed in Chapter 8 of this report.

NOTES

[1] Environmental Quality Commission, *State of Kentucky's Environment* report, 1992, p. 53.

[2] Ibid.

[3] Ibid, p. 62.

[4] Nancy Gover, "Constructed Wetlands Operate Despite Winter's Chill," *Small Flows* vol. 7 no. 1, January 1993, p.1.

[5] Franklin R. Schutz, "TVA's New Design Guidelines for Constructed Wetlands Alter Size, Shape, Design Process," *Small Flows*, vol. 6 no. 1, January 1992, p.2.

[6] Environmental Quality Commission, *State of Kentucky's Environment* report, 1992, p. 62.

APPENDIX B

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER

A STRATEGY FOR

REGIONALIZATION OF TREATED WASTEWATER

DISCHARGES IN KENTUCKY

June, 1990

INTRODUCTION

A desirable objective of effective water management in the Commonwealth is to minimize the number of treated wastewater discharges to the state's waters. Both surface and groundwater quality can be enhanced through improved treatment plant operation and management (O & M). Cost-effective O & M is best achieved by adequately trained and compensated personnel operating well designed, sized, and located treatment facilities. The existing proliferation of very small and so-called "package" plants is counterproductive to the stated objective, if alternatives are available, e.g., regional publically-owned treatment works (POTWs).

Authority to address this situation may be found in the Federal Clean Water Act; KRS 76, 103, 106, 107, 220, 224, and 224A; and KAR 401: 4, 5, and 6. The regionalization initiative is not an indictment of "package" plants. In many situations, they are the prudent choice for wastewater treatment. However, in many cases they also represent a wastewater control method whose proper and continuing operation and maintenance are beyond the interest and capability of the owner/builder/developer. A parallel can be drawn, for illustration, to potable water supply, solid waste disposal, and other recognized public utilities. These also represent activities and responsibilities that are more effectively left to the public sector and/or to private enterprise at a feasible economic scale.

Both very small and "package" treatment plants generally find their application in locations remote from POTWs, e.g., in locations that are not included in a defined planning area. Examples are at subdivisions, industrial sites, schools, highway interchanges, private

homes, and recreation facilities. Planning, zoning, water quality and public health requirements mandate the proper collection, treatment, and disposal of the generated wastewater. Builders, developers, institutions, and private enterprise must meet the need for such facilities. However, that being done, their interest and attention again focuses on the business in which they are primarily engaged. It follows that the pragmatic result of the required installation of such facilities is often one of neglect of the on-going O & M needs. In many, if not most, situations there is no mechanism to meet the continuing daily operating and performance tasks after such a plant is installed and placed in operation.

For the purpose of this strategy, "regionalization" is defined as: 1) the permanent cessation of a point-source treated wastewater discharge by elimination of a treatment facility with diversion of its raw wastewater flow to a POTW; 2) the combining of two or more existing facilities into a new or selected regional treatment facility; 3) preventing, insofar as possible, new discharges by requiring connection to an existing facility; or 4) the creation of sanitary districts and/or regional wastewater authorities.

The data (March 1990) shown in Table I illustrate the scope of the situation at which regionalization is aimed.

TABLE I. - Number of Facilities for Possible Regionalization

River Basin	Facility Type and Number			
	Industrial(1)	Subdivision	School	Small Sewage(2)
Big Sandy	127	15	48	202
Green	126	9	58	106
Kentucky	127	26	60	221
Licking	52	11	27	109
Little Sandy	5	3	11	56
Lower Cumberland	30	0	3	39
Mississippi	25	4	5	10
Ohio	157	75	48	266
Salt	48	65	19	191
Tennessee	41	6	10	47
Tradewater	23	1	5	17
Tygarts Creek	6	2	7	3
Upper Cumberland	101	5	47	145
Sub-totals	868	222	348	1,412
TOTAL		**2,850**		

(1) Some industrial facilities are very large, and/or due to the type of wastewater (e.g., steam power plants, coal, surface mining, steel mills, oil refining, chemical, large volume cooling water) are not viable candidates for regionalization.

(2) "Small sewage" plants are, by regulatory definition, facilities discharging less than 10,000 gpd. They are distinct from the other three categories listed. Representative examples include various commercial establishments, highway interchanges and rest areas, private homes, institutions, mobile home parks, marinas, apartment complexes, recreation facilities, and motels.

Investigation, through this strategic process, is certain to indicate that a number of these facilities and/or discharges cannot be eliminated or regionalized for reasons of economic and technical feasibility. However, the effort and the result will be progress toward improved environmental protection in Kentucky.

This strategy is designed to assess and document the perceived problems, identify reasonable ways by which to deal with them based on currently available mechanisms, and incorporate the results from this effort into the Division of Water's (DOW) administrative and planning processes.

In implementing the strategy, all branches of the DOW will become involved. The lead is most appropriately taken by the Program Planning/Administration and Permit Review Branches. (See Data Review and Use, Item 1, page 6 following).

The following strategy is designed to develop an achievable plan for reducing the number of point-source treated wastewater discharges in Kentucky.

STRATEGY

The strategy is composed of two distinct parts, each of which leads to the next sequential step toward exploring the objective of regionalization.

Data Gathering

1. Using the facility file, wasteload allocation files, and other sources, determine the number of permitted discharges in the state segregated by river basin, DOW region, and counties within each region.

2. Prioritize counties to be thoroughly investigated considering such factors as number of potentially eligible facilities for regionalization, impact on water quality, and opportunity for success. The latter factor is in the context of the overall strategy as a pilot effort from which recommendations can evolve for consideration as a part of the state's water management plan.

3. Take the facilities identified in 2. above as industrial, subdivision, school, and small sewage; and using location data from the facilities and the Kentucky Pollutant Discharge Elimination System (KPDES) files, plot each facility on a 1" = 1 mile scaled county map. Also show, if possible, the present extent of all POTW service systems. Some of this work will be done by Area Development Districts (ADDs). The Geographical Information System (GIS) will be used also.

4. Correlate information from: 1., 2., and 3. above to ADD service areas.

5. Monitor progress and evaluate data and experiences of the pilot regionalization efforts being made by the Big Sandy, Blue Grass, and Purchase ADDs through their agreements with the DOW.

6. Compile and review KPDES permit status, discharge compliance records, water quality impact data and enforcement actions and results.

7. Compile and review information on those facilities that have received or are receiving technical assistance aimed at improved O & M, including the nature and result of such aid.

8. As needed, use the Council of State Governments (CSG) or other appropriate entities to survey and report on the attitude of local governmental officials, documented results of Kentucky ADD efforts, and case histories of efforts in other states toward regionalization.

9. Review existing Kentucky Revised Statutes (KRS) and Kentucky Administrative Regulations (KAR) to identify those elements that may either promote or impede regionalization.

10. As in 8. above, review the practices and results of the state's permit (construction, operating, and KPDES) issuance and renewal processes.

It is anticipated that Items 1-6, inclusive, of the data-gathering process will require tabulated numerical information with brief narrative comments as needed. Items 7-10, inclusive, will require narrative reports with supporting data.

Data Review and Use

1. Form an intra-Division, inter-Branch committee to meet regularly to review and assess the information compiled, propose strategy revisions as needed, and report to and receive direction from the Branch managers.

2. Review and assess the data and information gathered.

3. Review and assess activities/programs in other states for consideration of applicability to Kentucky.

4. Identify a mechanism(s) by which to review applications for wastewater project funding and supporting planning documents (including projects in progress) for features that will help achieve regionalization.

5. Draft recommendations to promote and achieve regionalization by:

   a) amended permit issuance processes,
   b) best use of 205(j) funds,
   c) identifying potential financing and other incentives available to facility owners,
   d) revisions to the provisions of KRS and/or KARs, and
   e) updating of the state's water management plan.

6. Seek Division/Department/Cabinet approval and endorsement of the recommendations. Also see Item 8 below.

7. Plan and provide for the conduct of educational efforts and public input related to regionalization using publications and meetings of:

   a) appropriate state agencies,
   b) the ADDs,
   c) Kentucky League of Cities (formerly KML),
   d) Kentucky Association of Counties,
   e) Kentucky Water Management Task Force,
   f) interim legislative committees,
   g) the Governor's Environmental Conference, and
   h) other appropriate activities and outlets.

8. Revise recommendations, as appropriate after both Items 6 and 7 above.

9. Develop a data recording and reporting system to track results of the regionalization efforts.

10. Draft final recommendations to be proposed for inclusion in the updated water management plan.

11. Assist, as needed and appropriate, in preparation for the 1992 legislative session.

CONCLUSION

Implementation of this strategy can lead to a knowledgeable assessment of the viability and the determination of the extent of regionalization possible in Kentucky. The physical, economic, regulatory, and political constraints identified will allow development of those elements necessary for effective water management and environmental protection planning and programs.

APPENDIX C

PHILLIP J. SHEPHERD
SECRETARY

BRERETON C. JONES
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601

STATEMENT OF BASIS

KPDES No.: **Permit Writer:** **Date:**

Facility Name:

Location:

Receiving Stream:

Stream Segment Use Classification: Warmwater Aquatic Life

Stream Low Flow Condition:

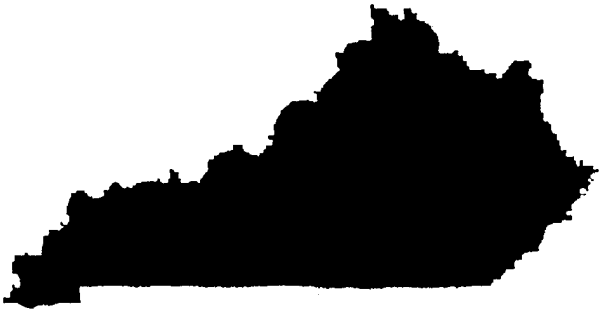
Permit Duration: 5 years

Justification of Permit Limits:

Biochemical Oxygen Demand (5 day), Total Suspended Solids, Fecal Coliform and pH
The effluent limitations for the above permit parameters are consistent with 401 KAR 5:045, pursuant to KRS 224.70-100, 224.70-110.

Ammonia Nitrogen and Dissolved Oxygen
The effluent limitations for the above permit parameters are consistent with 401 KAR 5:031, pursuant to KRS 224.70-100, 224.70-110.

KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

is authorized to discharge from a facility located at

to receiving waters named

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof. The permit consists of this cover sheet, and Part I 2 page(s), Part II 1 page(s) and Part III 1 page(s).

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed

Jack A. Wilson, Director
Division of Water

Robert W. Logan
Commissioner

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Division of Water, Frankfort Office Park, 14 Reilly Road, Frankfort, Kentucky 40601

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from outfall(s) serial number(s): 001, Sanitary Wastewater.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS lbs/day Monthly Avg.	lbs/day Daily Max.	Other Units (Specify) Monthly Avg.	Other Units (Specify) Daily Max.	MONITORING REQUIREMENTS Measurement Frequency	Sample Type	Sampling Location
Flow, Design (0.025 mgd)	N/A	N/A	Report	Report	1/Weekday	Instantaneous	Influent or Effluent
Biochemical Oxygen Demand (5 day), Carbonaceous	2.09	4.17	10 mg/l	20 mg/l	1/Month	Composite	Effluent
Total Suspended Solids	6.25	12.5	30 mg/l	60 mg/l	1/Month	Composite	Effluent
Fecal Coliform Bacteria, N/100	N/A	N/A	200	400	1/Month	Grab	Effluent
Ammonia (as N)	0.83 2.09	1.67 4.17	4 mg/l* 10 mg/l**	8 mg/l* 20 mg/l**	1/Month	Composite	Effluent
Dissolved Oxygen shall not be less than 7 mg/l					1/Month	Grab	Effluent

The pH of the effluent shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent shall not cause a visible sheen on the receiving water.

* Effective May 1 - October 31
** Effective November 1 - April 30

B. Schedule of Compliance

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

   a. Attain compliance with effluent limitations on the effective date of this permit.

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice to the permit issuing authority of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

3. The permittee will eliminate the discharge and will connect to a comprehensive sewer system provided such system can adequately treat the wastes.

STANDARD CONDITIONS FOR KPDES PERMIT

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal and local agencies.

PART III

OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results must be obtained for each month and reported on a preprinted Discharge Monitoring Report (DMR) Form which will be mailed to you each quarter for the upcoming quarter. The completed DMRs for each month must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the completed quarter.

Division of Water
Louisville Regional Office
9901A LaGrange Road
Louisville, Kentucky 40223
ATTN: Mr. Mike Mudd

Kentucky Natural Resources and
Environmental Protection Cabinet
Dept. for Environmental Protection
Division of Water
Inventory & Data Management
14 Reilly Road, Frankfort Office Park
Frankfort, Kentucky 40601

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under 401 KAR 5:050 thru 5:080 and KRS 224, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

APPENDIX D

REGIONALIZATION OF WASTEWATER TREATMENT FACILITIES - WHAT OTHER STATES HAVE DONE

May, 1990

BACKGROUND

In March 1989, Division of Water (DOW) Director Jack A. Wilson, through Construction Grants Branch Manager William B. Gatewood, P.E., contacted the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA). The request (see Attachment A) was for assistance in learning how other states have addressed the proliferation of small or package treatment facilities by controlling the number of permitted point-source discharges.

Replies were received from nine (9) states and two (2) interstate groups:

Alabama	New York
Florida	North Carolina
Georgia	Tennessee
Illinois	
Mississippi	New England Interstate WPC Commission
New Jersey	Western States Water Council

This report is a brief summary of the principal features of the respondent states' programs. The knowledge gained, perhaps supplemented by future selected detailed direct discussions, can help in formulating Kentucky's regionalization efforts. We can benefit from both the strengths and weaknesses identified in similar efforts by others.

SUMMARY OF OTHER STATE APPROACHES

Following are the salient features of the regionalization efforts as reported by the respondent states.

Alabama. There are an estimated 450 package plants, and the Department of Environmental Management has two (2) full-time people assigned to the permitting and compliance of them. Other policies are:

1. New dischargers are not approved to a receiving stream with a drainage area of less than five (5) square miles at the point of discharge.

2. Facilities required to have low BOD and NH_3 limits are encouraged to pursue alternate means of effluent disposal, the most widely used being low-pressure spray or drip irrigation systems.

3. New applicants are provided a list of existing dischargers in their area that may have sufficient capacity to treat additional wastewater flow. There has been no regionalization of existing facilities.

Florida. The approach to regionalization and limitations on the construction of new package treatment facilities is addressed in legislation at both the state and local levels.

1. Currently regulations (Florida Administrative Code (FAC)) permit the construction and operation of package plants having a design average daily flow between 2,000 and 100,000 gpd.

2. Although the FAC allows construction of package plants, recent state legislation (Florida Statutes (FS)), strengthens the power of state and local governments to guide and control future development including the construction of multiple package plants. Each local government is required to prepare a comprehensive plan subject to state review and adoption. Once adopted, the plan has legal status and no public or private development shall be allowed unless it is in conformance with the adopted plan.

3. Minimum criteria for these comprehensive plans are given in the FAC. The adopted plan must address the issue of maximizing the use of existing wastewater treatment facilities to discourage urban sprawl. Trends toward regionalization have been seen.

4. Non-compliance with discharge permit conditions is used to eliminate poorly operated package plants. Permittees out of compliance are strongly encouraged to connect to an available sewer if possible. Generally, it is more cost effective for the permittee to connect than to construct facilities to achieve compliance.

5. Local governments have developed codes to promote and/or require regionalization and reduce the number of package plants.

   a) Dade County (Miami area) - requires privately-owned "interim" plants serving properties within one-quarter (¼) mile of a public sewer to cease operation within six (6) months from the date such a sewer is available; publically-owned plants must cease operation within two (2) years from the date of public sewer availability.

   b) Broward County (Ft. Lauderdale area) - has developed strict effluent limits difficult for package plants to achieve. Generally, it is more cost effective for existing plants to regionalize than provide the additional treatment required. In a period of about ten (10) years, the number of treatment facilities in the county was reduced from some 170 to 16, or more than 90 percent.

   c) Jacksonville (an urban-county government) - regional wastewater treatment facilities were designated, and all non-regional facilities must connect to a regional plant within five (5) years.

Georgia. Regionalization of existing private or institutional development (PID) plants is encouraged by a permit condition requiring connection to a POTW when available.

For proposed PIDs, state regulations require the application of the best available demonstrated control technology (BADT) including, where practicable, a standard permitting no discharge of pollutants. The BADT permitting no discharge is land treatment, and therefore, construction of a new PID facility having a discharge to a receiving stream is not allowed. All new PIDs must use land treatment and adhere to the state's Criteria for Slow-Rate Land Treatment.

Illinois. The state relies on regional planning requirements that specifically designate the service areas of regional treatment plants; permits are not issued that would violate the adopted regional plan.

The state agency is aware of poor quality effluents being more common than an acceptable quality.

Design standards were adopted in March 1980. These set a floor for the approval of an activated sludge package plant at 2,500 population equivalent (PE) or 250,000 gpd of domestic sewage for all new plants. Existing plants serving less than 2,500 PE can be expanded using the activated sludge process.

Aerated lagoons or non-aerated multi-cell waste stabilization ponds are used in most cases for small facilities. The state has recognized the need for simplicity of lagoon treatment and made provisions for relaxing effluent limits through an exemption process. The facility owner must apply for the exemption and make an adequate model showing that the receiving stream water quality standard will be met.

Mississippi. The state discourages the use of mechanical plants for small discharges and prefers the use of conservatively designed lagoons. The use of the receiving stream, not necessarily its size, influences the type of lagoon treatment allowed to be installed.

The discharge permits require connection to a POTW if and when available. Routinely, an economic evaluation is made comparing the cost of the separate treatment to the cost of connecting to an exiting sewer. Connection is required if its costs are within 150 percent of the cost of the treatment facility. Proximity of one-fourth (¼) mile will also require connection.

New Jersey. There is a co-permittee requirement for all new domestic wastewater treatment facilities (DWTFs).

It is required that local government entities (such as a sewerage/utility authority) be the sole permittee or co-permittee for all new domestic wastewater treatment facilities and for the expansion of existing domestic wastewater facilities.

Notwithstanding this requirement, local agencies have significant flexibility in choosing an institutional arrangement which is satisfactory to both the applicant and the state. This arrangement can range anywhere from total ownership and operation of facilities by a governmental entity, to ownership and operation by a private entity (developer or homeowners' association) with just oversight by the agency (similar to co-signing a loan). Any bonding or other maintenance guarantees can be arranged between the developer or association and the agency.

The state requires a co-permittee with the authority to levy taxes or fees, as necessary, to ensure long-term viability and operation of the wastewater treatment facility in case there is a problem with the main permittee. It is left to the applicant and the local government co-permittee involved to arrange financial responsibility; the state will not take an active role in that process.

Some local government co-permittees presently require receipt of Discharge Monitoring Reports from the permitted facility and/or periodic inspection by the co-permittee's engineer. There is a range of options available, and it is necessary for the local government co-permittee to look at each case individually to decide what is appropriate.

Implementation of the co-permittee requirement is through the permitting process and both the principal applicant and the local government co-permittee must jointly sign the permit application. In addition, a formal resolution passed by the local government co-permittee is needed to satisfy the requirement for the NJPDES permit application. Any arrangements regarding the financial responsibility are between the main permittee and the co-permittee.

This process is viewed as part of the overall responsibility of the local government or sewage/utility authority to manage its wastewater treatment needs.

New York. An application for a proposed discharge is subject to a waste assimilative capacity analysis. For low and intermittent flow streams, stringent permit limits are assigned.

Package plant facilities are not inspected nor required to submit discharge monitoring data on a routine basis. Inspections are made only on receipt of a complaint and/or facilities discharging to an environmentally sensitive area.

There is concern when there are too many discharges from small facilities to the same stream segment or drainage basin. Theoretically, designated effluent limits will meet stream standards.

The issue of when and if regionalization is considered is left to local units of government at the town or county level. If there are clear indications that standards are not being met, pressure can be exerted by the state to require regional sewerage studies.

North Carolina. Under the old federal program with its associated funding regional plants were preferred and required if the federal funds were received. The state still prefers the regional concept; however, with the lack of federal funds to mandate this approach and the concerns of smaller cities about having their growth controlled by the operator of the regional system, North Carolina has also seen an increase in the number of small package plants. To address this concern the state has recently changed its regulations to require the permit applicant to justify his selected alternative.

The only limitation the state currently imposes is not to issue permits to zero flow streams, streams where a model predicts that water quality violations may occur, and to streams that have been designated SA or outstanding resources waters.

Tennessee. In Tennessee there are approximately 500 package plants, In 1984-85 a survey of approximately 250 Tennessee package plants indicated 50 percent were in obvious violation. Samples were obtained from about 40 plants; 80 percent of these were in violation. The state's enforcement capability has proven to be inadequate to deal with the non-compliance.

The state has responded to this situation in several ways. Regulations have been changed to prohibit activated sludge treatment facilities below 30,000 gpd. Activated sludge plants are only allowed below 100,000 gpd after all other treatment options have been exhausted. More passive systems such as the recirculating sand filter and constructed wetlands are being suggested. The aim is to require only reliable systems and thereby decrease the environmental impacts.

In at least one instance, site approval has been denied for a new package plant on a stream that has four (4) plants on it already. The case was not appealed but a defense was to be based on the likelihood of upsets impacting the classified uses of the stream. A regional plant is needed in the area. Presently there is no other way to influence regionalization other than to deny site approvals similar to this case.

New England Interstate WPC Commission. In 1988, Massachusetts conducted a National Survey of State Regulations on Private Sewage Treatment Facilities. A summary report is on file in the Permit Review Branch.

Items of interest from states not listed above include:

1. Arizona issues aquifer protection permits for systems discharging more than 2,000 gpd.

2. California is divided by river basin into nine (9) Water Control Boards, each having a regional water quality control plan.

3. Hawaii delegates the regulation of wastewater treatment systems to county governments.

4. Indiana has no regulations to control on-site treatment plants, and is experiencing problems with existing systems.

5. Kansas discourages package plants by policy.

6. Nevada requires an agreement with a city or county to take over treatment plant operations in the event of a plant failure. The plant owner must participate by bond in paying the cost of tieing their property into a POTW.

7. Oklahoma requires annual renewal of discharge permits.

8. Oregon assures owner liability of treatment systems with regulations entitled, "Surety Bonds or Other Approved Equivalent Security for Construction, Operation and Maintenance of Sewage Collection, Treatment, or Disposal Facilities." The regulations state that any treatment system greater than 5,000 gpd must file a surety bond. The amount shall be equal to $1.00 per gallon per day of installed sewage capacity. This bond remains until a state or federal agency, city, county, county service district, sanitary authority, sanitary district or other public body acquires ownership or assumes responsibility for the operation and maintenance of the system.

9. Rhode Island has been successful in discouraging small treatment systems by an unwritten policy.

10. South Carolina has no specific regulations, but treats all private and municipal systems alike.

11. Utah requires that a consultant supervise data gathering for all treatment and disposal facility plans. For systems greater than 10,000 gpd a pre-design conference with the state is recommended.

12. Vermont requires an annual inspection and report by a professional engineer for all septic tanks.

13. Wisconsin requires that all components of a community system be owned and maintained by a special purpose district.

Western States Water Council. The Council has not been involved with the package plant issue.

CONCLUSION

Further use of the information presented here can best be made by direct follow-up with representatives of selected states.

Perhaps the approaches taken by others will also suggest new means by which Kentucky can effectively address regionalization and/or elimination of permitted treated wastewater discharges.

Bob Rogers, P.E.
Permit Review Branch

What Other States Have Done

Source Material

1. KY DOW letter to ASIWPCA, March 20, 1989.

2. Replies to Item 1 from:

   a) Alabama Department of Environmental Management, May 8, 1989.

   b) Florida Department of Environmental Regulation, April 26, 1989.
      Includes FAC Chapters 9J-5 and 17-6; FS Chapter 163; Dade County Code of Regulations Chapter 24; Broward County Code of Regulations Chapter 27; Jacksonville Environmental Protection Board Rule 3.

   c) Georgia Department of Natural Resources, April 10, 1989.
      Includes Criteria for Slow-Rate Land Treatment.

   d) Illinois Environmental Protection Agency, May 5, 1989.

   e) Mississippi Department of Natural Resources, April 5, 1989.

   f) New Jersey Department of Environmental Protection, May 26, 1989.

   g) New York State Department of Environmental Conservation, April 20, 1989.
      Includes memos on Waste Assimilative Capacity Analysis and Allocation for Setting Water Quality Based Effluent Limits.

   h) North Carolina Department of Natural Resources and Community Development, April 17, 1989.
      Includes 15 NCAC 2H .0100 - Wastewater Discharges to Surface Waters.

   i) Tennessee Department of Health and Environment, May 4, 1989.

   j) New England Interstate Water Pollution Control Commission, April 24, 1989.
      Includes summary of National Survey of State Regulations on Private Sewage Treatment Facilities.

   k) Western States Water Council, April 4, 1989.

   These items are on file in the Permit Review Branch.

CARL H. BRADLEY
SECRETARY

WALLACE G. WILKINSON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 20, 1989

Association of State and Interstate
Water Pollution Control Administrators
Hall of the States
444 North Capitol Street, NW - Site 330
Washington, D.C. 20001-1512

Re: Regionalization of Wastewater
Treatment Facilities

Gentlemen:

Kentucky has a large number of small package treatment plants discharging into low flow streams. In some cases, the assimilative capacity of the stream has been reached. In other cases, capacity remains, but the package plants operate in violation due to neglect and the lack of an experienced operator.

Specifically, we need to understand how other states deal with the issue of multiple package plants. We receive many requests for construction of package plants to serve subdivisions, schools, and commercial developments in areas where city sewers are not available.

Regionalization of treatment facilities is of particular interest to us. This letter is to request your assistance by providing us with any information you may have concerning regionalization or a limitation on constructing additional package treatment facilities. If you have any questions concerning this request, please call Bill Gatewood, Manager, Construction Grants Branch at (502) 564-3410.

Sincerely,

Jack A. Wilson
Director
Division of Water

JAW:WBG:pam

APPENDIX E

Legislative Item 1: Assurances of Responsibility for Package Plant Operators

AN ACT relating to environmental protection and residential sewage systems.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

SECTION 1. A NEW SECTION OF KRS CHAPTER 224 IS CREATED TO READ AS FOLLOWS:

(1) The General Assembly finds that many privately-owned sewage systems which serve residences operate above their design capabilities, that the owners of those sewage systems frequently fail to plan for future population growth, and that the number of those sewage systems has proliferated. These problems have led to pollution of the waters of the Commonwealth. It is therefore the purpose of this section to promote long-range planning for the siting of sewage systems serving residences, and to promote regionalization of those sewage systems.

(2) This statute shall apply to all sewage systems that are not owned by a publicly owned treatment works, and which serve residences.

(3) No permit to discharge into the waters of the Commonwealth shall be issued or reissued for any sewage system in conflict with a regional or facility plan or in conflict with a water quality management plan or plan amendment approved by the Natural Resources and Environmental Protection Cabinet or EPA.

(4) No permit to discharge into the waters of the Commonwealth shall be issued or reissued for any sewage system serving residences whose users are capable of being served by an existing publicly owned treatment works.

(5) As a condition of the issuance or reissuance of any permit for the discharge of sewage, the owner of any sewage system shall be required at his expense to connect the system to a publicly owned treatment works when the sewage system is capable of being served by the publicly owned treatment works.

(6) A permit to discharge to the waters of the Commonwealth will not be issued to an applicant unless a governmental entity including the county, municipality or an area development district created pursuant to KRS 147A, where the permit is located or the local metropolitan sewer district created pursuant to KRS Chapter 76 or sanitation district created pursuant to KRS Chapter 220 or KRS Chapter 67, if there is one serving the area where the plant is located, assumes:

(a) Responsibility in case of default by the permittee for the continued operation and maintenance of the sewage system in accordance with all of the terms and conditions of the permit; and

(b) The duty of assessing the lands served by the sewage system as provided below;

(7) The applicant shall furnish the governmental entity assuming responsibility sufficient surety in the form of a bond, certificate of deposit, investment certificate or any other form acceptable to the entity, to ensure the continued maintenance and operation of the sewage system.

(8) (a) No permit shall be issued or reissued for a sewage systems unless the owners of the lands to be served by the sewage system shall record a declaration of covenants, conditions, and restrictions, which is an equitable servitude running with the land and which must provide that each lot or parcel will be assessed by the governmental entity assuming responsibility for the plant for its proportionate share of the cost of continued operation and maintenance of the sewage system if the permittee or operator of the sewage system fails to comply with the permit, this chapter or any administrative regulations. The proceeds of any assessments upon lots or parcels must be deposited with the treasurer of the responsible governmental entity and the funds may be expended only for the following purposes:

(1) Continued maintenance and operation of the sewage system;

(2) Replacement of the sewage system if necessary; and

(3) Payment of the costs of connection to any publicly owned treatment works that is capable of serving the users.

(b) The declaration of covenants, conditions, and restrictions recorded by the owners shall further provide that if the responsible governmental entity determines that the plant is not satisfactorily serving the needs of its users, and a publicly owned treatment works is capable of serving the users, the responsible governmental entity shall require all users of the sewage system to connect into the available sewers provided by a publicly owned treatment works and each lot or parcel will be assessed by the responsible governmental entity for its proportionate share of the cost of connecting into those sewers. These assessments are not subject to the jurisdiction of the Public Service Commission of Kentucky.

(9) Provisions shall be made for disposition of the sewage system and the land on which it is situated after the responsible governmental entity requires all users to connect into available sewers provided by a publicly owned treatment works.

(10) If the cabinet finds that any of the conditions of a permit to discharge water from a sewage system are being violated and has notified the holder of the permit that he must bring the system into compliance, but the holder of the permit has failed to comply within a reasonable time after the date of the notice, the responsible governmental entity shall take the following actions independently of any further action by the cabinet:

(a) Give written notice, by certified mail, to the owner of the sewage system and the owners of the property served by the sewage system that if the violation is not corrected within 30 days after the date of the notice, the responsible governmental entity will seek a court order authorizing it to assume control; and

(b) After the 30 day period has expired, if the sewage system has not been brought into compliance, apply to the circuit court for an order authorizing the responsible governmental entity to assume control of the sewage system and assess the property for the continued operation and maintenance of the sewage system as provided above.

(11) If the responsible governmental entity determines at any time that immediate action is necessary to protect the public health and welfare, it may assume physical control and operation of a sewage system without complying with any of the requirements set forth in subsection 10. The responsible governmental entity shall not maintain control of the sewage system pursuant to this subsection for a period greater than 30 days unless it obtains an order from the circuit court authorizing it to do so.

(12) Nothing in this statute shall prevent:

(a) A local governing body or a health district from imposing its own conditions for approval of the operation of any sewage system located within its jurisdiction, which may be more stringent than those authorized by this chapter.

(b) A local governing body from requiring the prior approval of proposed sewage systems by a local committee created for this purpose.

(c) A local governing body from converting connections to a sewage system into connections to sewers provided by a publicly owned treatment works.

(13) The cabinet shall have the authority to promulgate administrative regulations to implement this statute.

APPENDIX F

Legislative Item 2: Long-Range Plans for Non-POTWS

AN ACT relating to environmental protection.

(1) The General Assembly finds that many privately-owned sewage systems which serve residences operate above their design capabilities, that the owners of those sewage systems frequently fail to plan for future population growth, and that the number of those sewage systems has proliferated. These problems have led to pollution of the waters of the Commonwealth. It is therefore the purpose of this section to promote long-range planning for the siting of sewage systems serving residences, and to promote regionalization of those sewage systems.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

SECTION 1. A NEW SECTION OF KRS CHAPTER 224 IS CREATED TO READ AS FOLLOWS:

(2) This statute shall apply to all sewage systems serving residences that are not owned by a publicly-owned treatment works.

(3) No permit to discharge into the waters of the Commonwealth shall be issued or reissued for any sewage system in conflict with a regional or facility plan or in conflict with a water quality management plan or plan amendment approved by EPA.

(4) No permit to discharge into the waters of the Commonwealth shall be issued or reissued for any sewage system whose users are capable of being served by an existing publicly owned treatment works.

(5) No permit to discharge into the waters of the Commonwealth shall be issued or reissued for any sewage system unless the owners of the sewage system submit to the cabinet a long-range wastewater treatment plan to assure that adequate treatment capability will be provided for the projected service area. The plan shall identify areas where future growth is likely to occur and shall identify the capacity expected to be needed for a ten-year period. The cabinet may condition or deny a permit to construct or expand the sewage system in order to assure that

treatment capability will not be exceeded and that current or projected development of a regional sewage system owned by a publicly owned treatment works is considered.

(6) No permit to discharge into the waters of the Commonwealth shall be issued or reissued unless the owner submits to the cabinet a statement from any publicly owned treatment works (POTW) within a regional or facility plan or water quality management plan area in which the sewage system is located, describing the POTW's plans for providing service to the area and indicating when the POTW plans to serve the residence to be served by the sewage system. If the POTW plans to expand services to the area to be served by the sewage system, the application shall include a joint statement by the owner and the POTW demonstrating projected arrangements when POTW service is provided.

(7) As a condition of granting or renewal of any permit for the discharge of sewage into the waters of the Commonwealth, the owner of the sewage system shall be required to connect to a publicly owned treatment works at his expense when the sewage system is capable of being served by the publicly owned treatment works.

(8) After permit application has been approved but before such a permit is issued, the applicant for any sewage system shall file with the cabinet, on a form prescribed and furnished by the cabinet, a bond for performance payable, as appropriate, to the state, and conditional upon faithful performance for all the requirements of this chapter and the permit. The bond shall guarantee the continued operation of the plant and provide for the cost of connection to a publicly owned treatment works when the sewage system is capable of being served by the publicly owned treatment works.

(9) The cabinet shall promulgate regulations to implement this section.

APPENDIX G

Legislative Item 3: Wastewater Planning by Local Governments

AN ACT relating to environmental protection.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

SECTION 1. A NEW SECTION OF KRS CHAPTER 224 IS CREATED TO READ AS FOLLOWS:

(1) The cabinet shall administer a program for the purpose of developing long range public drinking water systems and wastewater treatment systems plans for each county and its municipalities or for a region composed of more than one (1) county.

(2) This statute shall apply to all counties in the Commonwealth and all incorporated cities of the first and second class.

(3) Every county, in conjunction with cities incorporated within the county, or a region composed of more than one county shall prepare an area wide wastewater and drinking water management plan. The plan shall be consistent with this statute and shall address the sewage treatment, distribution, and collection and the drinking water treatment and distribution needs of the county.

(4) Each county shall be responsible for implementing the plan, except that any city of the first or second class, having sole responsibility for developing the portion of the area plan applicable to its jurisdiction, shall be responsible for implementing the portion of the plan prepared by the city.

(5) No permit shall be issued by the Natural Resources and Environmental Protection Cabinet or the Cabinet for Human Resources/County Health Department for sewage or drinking water services within a county which conflicts with a county's wastewater and drinking water management plan.

(6) The wastewater and drinking water management plan shall include, but not be limited to:

(a) The identification of wastewater and drinking water treatment services necessary to meet the current and anticipated individual, municipal, commercial and industrial waste and drinking water treatment needs of the area over ten (10) and twenty (20) year periods;

(b) The identification of those existing or required agencies or political subdivisions necessary to construct, operate and maintain all facilities required by the plan and otherwise necessary to carry out the plan;

(c) The establishment of construction priorities for such treatment works, time schedules for the initiation and completion of all treatment works, and the manner in which future expansions and reconstruction will be financed;

(d) An analysis of alternative wastewater treatment systems and any requirements for the acquisition of land for treatment purposes;

(e) An evaluation and consideration of the best practicable wastewater treatment and drinking water distribution technology;

(f) The identification of the necessary wastewater collection and municipal storm water runoff systems;

(g) A program to provide the necessary financial arrangement for the development of such treatment works; and

(h) The establishment of a regulatory program to provide control or treatment of all point sources of water pollution, including in-place or accumulated pollution sources, to the extent practicable, to regulate the location, modification and construction of any facilities within such area which may result in any discharge in such area, and to assure that any industrial or commercial wastes discharged into any treatment works in such area meet applicable pretreatment requirements.

(i) The consideration of socio-economic, land use, transportation, geographic, and water resource issues.

(j) The measures necessary to carry out the plan, including financing, the period of time necessary to carry out the plan, the costs of carrying out the plan within such time, and the economic, social, and environmental impact of carrying out the plan within such time; and

(k) A process of development, management, and disposal of beneficial sludge.

(7) The plans may be developed by area development districts in conjunction with the counties and its municipalities and public drinking water systems or wastewater treatment systems within each district.

(8) A county and its municipalities may require that the plan be developed for its jurisdictional area only or, if there is agreement between two (2) or more counties, that the plan be developed jointly with other counties.

(9) A county may delegate responsibility for preparing all or portions of the plan to one (1) or more cities of the first or second class within the county. Such delegation of responsibility shall be made only with the mutual agreement of the city and county. Each city and county shall be included in the plans.

(10) After 1998, the cabinet shall not issue permits or approvals for construction or expansion of sewage systems and drinking water services in those counties without an approved wastewater and drinking water management plan except as the cabinet deems necessary to protect the environment or the health and welfare of citizens of the Commonwealth.

(11) The plans shall be subject to approval by the cabinet. Plans shall be updated once every five (5) years. Plans may be amended and such amendments shall be submitted to the cabinet for review and approval.

(12) The cabinet shall promulgate administrative regulations pursuant to KRS Chapter 224 for the development of these plans.

Glossary of Terms

Area Development Districts (ADDs) -- multi-county regional planning agencies in Kentucky established in KRS 147A.050 to encourage appropriate development in their constituent counties. Many ADDs provide administrative and technical assistance to wastewater systems, recognizing the role these systems play in attracting and sustaining development.

CHR -- Cabinet for Human Resources, Commonwealth of Kentucky. CHR's Department for Health Services, Division of Local Health, regulates on-site wastewater treatment systems (e.g., septic systems, constructed wetlands) that do not discharge into waters of the Commonwealth.

constructed wetlands -- wetlands created by human design, frequently in order to make use of their natural ability to treat various types of wastewater. Constructed wetlands treat sewage by filtering the effluent through a bed of aquatic vegetation such as cattails, bulrushes, and arrowhead. These plants absorb the excess nutrients and provide an environment for bacteria that can break down the other organic wastes.

CWA -- Clean Water Act, originally the Federal Water Pollution Control Act (FWPCA), 33 U.S.C. §§ 1251-1376, P.L. No. 92-500, 86 Stat. 816 (1972), and amended 12 times since 1972, most extensively in 1977, 1981, and 1987.

DMR -- Discharge Monitoring Report; a summary of self-monitoring data required as a condition of a KPDES permit to discharge from a point source into the waters of the Commonwealth.

DOW -- Division of Water, Commonwealth of Kentucky.

effluent -- the discharge from a sewer, septic tank, or other wastewater discharge point.

fecal coliform -- the portion of the coliform group of bacteria that are present in the essential tract or the feces of warm-blooded animals. These bacteria are not harmful to human health themselves, but their presence in water indicates the presence of human and/or animal waste, which may contain other bacteria that can cause severe intestinal distress or skin irritations.

GIS -- Geographic Information System. Any of a number of computer configurations and software applications that enable users to create, store, and analyze databases of spatial information (i.e., maps) with associated attribute data such as land use, topography, political boundaries, facility locations, etc.

groundwater -- water beneath the surface of the ground in a saturated zone.

KAR -- Kentucky Administrative Regulations.

KRS -- Kentucky Revised Statutes.

major municipals -- publicly owned wastewater systems treating 1.0 million gallons per day (mgd) or more.

minor municipals -- publicly owned wastewater systems treating less than 1.0 million gallons per day (mgd).

nonpoint source pollution -- pollution that cannot be traced to a specific point of origination, e.g., agricultural runoff, acid mine drainage, parking lot runoff.

NREPC -- Natural Resources and Environmental Protection Cabinet for the Commonwealth of Kentucky.

package plant -- wastewater facilities so named because they are typically purchased and installed as a complete prefabricated unit. These facilities are usually, but not always, small in size and capacity. They are particularly popular in remote and/or unincorporated areas, where they may serve schools, subdivisions, commercial establishments, institutions, highway interchanges, recreational facilities, private residences, etc.

PSC -- Public Service Commission for the Commonwealth of Kentucky, established under KRS Chapter 278.

point-source pollution -- pollution that can be traced to a specific, known point such as a sewer, pipe, ditch, or drain.

POTW -- Publicly Owned Treatment Works, defined in KRS 224.01-010 (19) as "any device or system used in the treatment (including recycling and recovery) of municipal sewage or industrial wastes of a liquid nature which is owned by the Commonwealth or a political subdivision of the Commonwealth."

regionalization -- In the context of this report, this term is defined as (1) the elimination of a treatment facility with diversion of its raw wastewater flow to a POTW; (2) the combination of two or more existing facilities into a new or selected regional treatment facility; (3) the prevention of new discharges, where possible, by requiring connection to an existing facility; or (4) the creation of sanitation districts and/or regional wastewater authorities.

septic system -- a wastewater treatment system consisting of a sewage settling tank and a drainage field. Organic solids are separated from wastewater flowing through the tank. The solids in the settled sludge on the bottom of the tank are decomposed by bacterial action, and the overflowing wastewater is dispersed below the surface into the soil of the drainage field.

small sewage plants -- by regulatory definition, facilities discharging less than 10,000 gpd. Within the category of package plants, they are distinct from facilities serving subdivisions and schools. Representative examples include various commercial establishments, highway interchanges and rest areas, private homes, institutions, mobile home parks, marinas, apartment complexes, recreation facilities, and motels.

SRF -- State Revolving Fund, a revolving loan fund for wastewater projects. Established under the Clean Water Act, the SRF replaced the former program of grant assistance. In Kentucky, the SRF program is administered by the Division of Water (DOW).

201 plan -- wastewater treatment management plans required under the Clean Water Act, Section 201(a). Planning requirements spelled out in 40 CFR Chapter 1 Section 35.2030 direct these plans to include evaluation of the need for proposed and future facilities and a schedule for providing wastewater service in the planning area.

Section 205(j)/604(b) program -- Water quality management planning activities funded by a 1 percent set-aside of federal contributions to the State Revolving Fund (formerly the Construction Grants program), as authorized in the Clean Water Act (CWA), Section 205(j) and the CWA, Section 604(b). Section 205(j) also mandates that the state work with local, regional, and/or interstate entities to plan and carry out these water quality management planning activities, and must allocate at least 40 percent of the monies received under this program to regional planning organizations.